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EXAMINER	
ABELSON, RONALD B	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/303,554	Applicant(s) HAN, JONG SUN	
	Examiner Ronald Abelson	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-8* is/are rejected.

7)☒ Claim(s) *3-5 and 9-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *27 May 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Allowable Subject Matter

1. The indicated allowability of claim 14 is withdrawn in view of the applicant's admitted prior art AAPA in view of Gilhousen. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

2. Claims 4, 9-11, 21-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Felix (US 5,946,356) in view of Hall (US 6,208,871).

Regarding claims 10, 21, 22, and 24-25, Felix teaches a method and apparatus for broadcasting at a base station information of at least one or more code class in which Walsh codes assigned to mobile stations from the base station are classified depending on transmission rate, to a plurality of mobile stations in its cell or sector, wherein the call access control signal is broadcast prior to receipt of an access channel request (fig. 1 box 100, fig. 4 box 409, col. 3 lines 45-50, col. 3 line 66 - col. 4 line 7).

Regarding claim 24, Felix teaches accessing the base station using an available code class based on the received

Walsh code and class state information (call is originated, col. 4 12-15).

Felix is silent on broadcasting at a base station call access control signal including interference information of a reverse link.

Hall teaches on broadcasting at a base station call access control signal including interference information of a reverse link (col. 2 lines 2-7).

Therefore it would have been obvious to one of ordinary skill in the art, having both Felix and Hall before him/her and with the teachings [a] as shown by Felix, broadcasting at a base station information of at least one or more code class in which Walsh codes assigned to mobile stations from the base station are classified depending on transmission rate, to a plurality of mobile stations in its cell or sector, wherein the call access control signal is broadcast prior to receipt of an access channel request, and [b] as shown by Hall, broadcasting at a base station call access control signal including interference information of a reverse, to be motivated to modify the system of Felix by modifying the pilot channel frame of Felix to include the interference information provided by Hall. This modification can be performed in software. This would improve

the system by providing necessary information in order to perform handoff.

Regarding claims 4, 11, and 26, the information of each code class indicates if the state of each code class is idle or busy. Note, the base station notifies the remote unit of the spreading codes currently used (Felix, col. 4 lines 4-6).

Regarding claim 23, performing a call access request based on the call access control information received at one of the plurality of mobile stations (Felix: powered up accordingly, col. 4 lines 12-15).

Regarding claim 9, if the reverse link included in the call access control information, the mobile station identifies the state of an individual resource of the code class so as to implement call access using a code class assigned to oneself among the code classes which are idle (Felix: col. 4 lines 3-7).

3. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Felix and Hall as applied to claim 23 above, and further in view of applicant's admitted prior art AAPA.

Although Hall teaches interference information and overall received power from the plurality of mobile station in the cell or sector (col. 2 lines 2-7), Hall is silent comparing the power with a predefined threshold value in order to indicate whether the link is idle or busy.

AAPA teaches comparing the interference information of the reverse link compares overall received power from the plurality of mobile stations in the cell or sector of the base station with a predefined threshold value, and then selectively indicates if a current reverse channel is idle or busy (pg. 2 line 25 - pg. 3 line 21).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Felix and Hall and AAPA before him/her and with the teachings [a] as shown by the combination of Felix and Hall, a method for controlling call access in a communication system by the base station repeatedly broadcasting interference and Walsh code information, and [b] as shown by AAPA, comparing the interference information of the reverse link compares overall received power from the plurality of mobile stations in the cell or sector of the base station with a predefined threshold value, and then selectively indicates if a current reverse channel is idle or busy, to be motivated to modify the system of the combination of Felix and

Hall by determining if the channel is idle or busy by comparing received power with a predefined threshold. This modification can be performed in software. This would improve the system by providing a proven, accurate method for determining if the channel is idle/busy.

4. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Felix and Hall as applied to claim 24 above, and further in view of Gilhousen (US 6,185,246).

Although Felix teaches assigning Walsh codes (col. 3 line 66 - col. 4 line 7), the inventor is silent on the code classes having relative priority.

Gilhousen teaches the code classes having relative priority (col. 12 lines 29-34, 46-48).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Felix and Hall and Gilhousen before him/her and with the teachings [a] as shown by the combination of Felix and Hall, a method for controlling call access in a communication system by the base station repeatedly broadcasting interference and Walsh code information, and [b] as shown by Gilhousen, code classes having relative priority, to be motivated to modify the system of the

combination of Felix and Hall by modifying the system of Felix to have the base station choose a code class based upon the data rate of the user. This modification can be performed in software. This would improve the system by assigning lower rate users longer codes and maintaining the more scarce shorter codes for higher rate users (Gilhousen: col. 12 lines 51-63).

5. Claims 12-20 rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Gilhousen (US 6,185,246).

Regarding claims 12 and 15-18, AAPA teaches a link busy/idle field indicating whether or not interference of a reverse link transmitted to a mobile terminal from a base station exceeds a preset threshold value (applicant: pg. 3 lines 6-18).

Regarding claim 15, AAPA teaches requesting a call access based on the received status (pg. 3 lines 18-21).

AAPA fails to teach the information of the code classes indicates individually whether the state of each code class is idle or busy, as specified in claims 12 and 15; the code class busy/idle field indicates whether the state of each code class is idle or busy, as specified in claims 13 and 19; the code class have relatively higher priority orders if a code length of each code class is different, as specified in claims 14; and the

requested call is based on a priority of the plurality of classes, as specified in claim 20.

Regarding claims 13 and 19, the examiner takes official notice that given that a data rate select signal (Gilhousen col. 18 lines 9-12) is sent to the mobile, it would be obvious to inform the mobile on which code classes are active or busy. If this were not the case, the mobile wouldn't know if it should request a channel.

Gilhousen teaches the information of the code classes indicates individually whether the state of each code class is idle or busy (col. 12 lines 18-36), as specified in claims 12 and 15; the code class have relatively higher priority orders if a code length of each code class is different (col. 11 lines 34-38, col. 12 lines 46-48), as specified in claim 14; and the requested call is based on a priority of the plurality of classes (col. 12 lines 29-34, 46-48), as specified in claim 20.

Therefore it would have been obvious to one of ordinary skill in the art, having both AAPA and Gilhousen before him/her and with the teachings [a] as shown by AAPA, teaches a link busy/idle field indicating whether or not interference of a reverse link transmitted to a mobile terminal from a base station exceeds a preset threshold value, and [b] as shown by Gilhousen, the information of the code classes indicates

individually whether the state of each code class is idle or busy and the requested call is based on a priority of the plurality of classes, to be motivated to modify the system of AAPA by transmitting to the mobile available Walsh code information for different data rates and assigning users different code classes based upon priority. This could be accomplished by transmitting the Walsh code information along with the interference information and having a software routine assign code classes based upon the user's data rate. This would improve the system by informing the mobile of the availability of Walsh codes and assigning a Walsh code length based upon the user's needs.

Allowable Subject Matter

6. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter.

Regarding claim 6, nothing in the prior art of the record teaches or fairly suggests a broadcasting channel per superframe

period, in combination with the other limitations listed in the claim.

Regarding claim 7, nothing in the prior art of the record teaches or fairly suggests a paging channel per slot cycle period, in combination with the other limitations listed in the claim.

Regarding claim 8, nothing in the prior art of the record teaches or fairly suggests the mobile station uses a code class having the highest priority if the mobile station requests call access from the base station, in combination with the other limitations listed in the claim. In contrast, Gilhousen teaches assigning low data rate uses long codes (col. 11 lines 34-38, col. 12 lines 46-48).

Response to Arguments

7. Applicant's arguments filed 5/27/2003 with respect to independent claims 12 and 15 have been fully considered but they are not persuasive. Regarding the applicant's contention that there is no motivation to combine AAPA and Gilhousen (applicant: pg. 8 last paragraph), both references pertain to CDMA systems. The examiner maintains one of ordinary skill in the art would be motivated to use interference information in order to choose an

appropriate Walsh code. As stated in the prior art, comparing the interference information of the reverse link compares overall received power from the plurality of mobile stations in the cell or sector of the base station with a predefined threshold value, and then selectively indicates if a current reverse channel is idle or busy (pg. 2 line 25 - pg. 3 line 21) is a standard way of determining if a channel is idle or busy. Regarding the applicant's contention in Gilhousen fails to teach repeatedly or periodically transmitting call access control information (applicant: pg. 9 1st complete paragraph), this limitation is not in the claims.

8. Applicant's arguments with respect to amended claims 10, 21, and 24 have been considered but are moot in view of the new ground(s) of rejection. Based upon an updated search, a new office action has been submitted.

9. Applicant's arguments, see pages 10-11 filed 5/27/2003, with respect to claims 6 and 7 have been fully considered and are persuasive. The rejections have been withdrawn.

Prior art is of record

10. The prior art is of record but not relied upon in the office action. Cao (US 6,292,471) teaches broadcasting at a base station call access control signal including interference information of a reverse link (fig. 2, col. 3 lines 16-24).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

DANG TON
PRIMARY EXAMINER